

REMARKS

Claims 1-60 are all the claims pending in the application. Applicant thanks the Examiner for indicating that claim 19 contains allowable subject matter and for indicating that claims 54-60 are allowed. For at least the following reasons, Applicant respectfully submits that claims 1-18 and 20-53 are also patentable.

Claim Rejections - 35 U.S.C. § 102

Claims 7 and 42 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Rom (U.S. Patent 6,360,264). Applicant respectfully traverses the rejection.

Claim 7

Claim 7 recites, *inter alia*, “outputting a response message corresponding to the handoff alert message to the mobile station, the response message including the channel information.”

However, Rom neither teaches nor suggests “outputting a response message corresponding to the handoff alert message to the mobile station, the response message including the channel information.” This is because Rom does not disclose that a response message having channel information is output to a mobile station. Rather, Rom discloses that a “request is relayed to the selected access point by the current access point, along with a transfer of certain node parameters.” *See* Rom, col. 5, ll. 22-26. Therefore, Rom fails to teach or suggest “outputting a response message corresponding to the handoff alert message to the mobile station, the response message including the channel information” because Rom does not disclose that a response message is sent to the mobile station, but instead Rom only discloses that the request is relayed to an access point.

Further, claim 7 recites, *inter alia*, “the collecting channel information and outputting a response message occurs prior to selection of a new access point in the extended service set.”

However, Rom neither teaches nor suggests “the collecting channel information and outputting a response message occurs prior to selection of a new access point in the extended service set,” as recited in claim 7. Rather, Rom discloses that “[a]fter selecting a new access point, the node communicates an instruction to the current access point...requesting the selected access point accept the handoff of the node.” *See* Rom, col. 5, ll. 18-22. Therefore, Rom cannot disclose “the collecting channel information and outputting a response message occurs prior to selection of a new access point in the extended service set,” since the request is not relayed until after the new access point is selected.

Accordingly, Rom fails to teach or suggest all the features of claim 7, and hence, claim 7 would not have been anticipated by Rom for at least these reasons.

Independent claim 42 recites features similar to those discussed above, and hence claim 42 also would not have been anticipated by Rom for at least reasons analogous to those discussed above regarding claim 7.

Claims 5, 11-16, 18, 20-26, 28, 29, 33, 34, 38-40, 43-46, and 48-53 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Lefkowitz (U.S. Patent 6,990,343).
Applicant respectfully traverses the rejection.

Claim 5

Claim 5 recites, *inter alia*, “receiving a reassociation response message from the new access point after a temporary connection is established between the new access point and a previous access point of the mobile station.”

However, Lefkowitz neither teaches nor suggests “receiving a reassociation response message from the new access point after a temporary connection is established between the new access point and a previous access point of the mobile station.” This is because Lefkowitz does not disclose a temporary connection established between a new access point and a previous access point of a mobile terminal. Instead, Lefkowitz merely describes a connection between STA 205 and WAP#1 210 and a connection between STA 205 and WAP#2 215. *See* Lefkowitz, col. 6, ll. 29-32, 44-46. There is no teaching or suggestion of any temporary connection whatsoever established between WAP#2 215 and WAP#1 210.

Accordingly, Lefkowitz fails to teach or suggest all the features of claim 5, and hence claim 5 would not have been anticipated by Lefkowitz for at least these reasons.

Claim 11

Claim 11 recites, *inter alia*, “establishing a temporary connection with a previous access point of the mobile station in response to receiving a reassociation message” and “terminating the temporary connection with the previous access point in response to establishing the optimum connection.”

However, Lefkowitz neither teaches nor suggests the combination of features recited in claim 7, alone or in combination with each other. This is because Lefkowitz does not disclose

that any connection is established between WAP#1 210 and WAP#2 215, and much less a temporary connection, as required by claim 11. Rather, Lefkowitz merely discloses a first connection between STA 205 and WAP#1 210, and a second connection between STA 205 and WAP#2. *See* Lefkowitz, col. 6, ll. 29-32, 44-46.

Similarly, Lefkowitz neither teaches nor suggests “A handoff method for an access point...comprising: terminating the temporary connection with the previous access point in response to establishing the optimum connection,” since Lefkowitz does not disclose that WAP#2 terminates a temporary connection to WAP#1 210. Rather, Lefkowitz merely discloses that STA 205 disassociates from its connection with WAP#1 210, with no teaching or suggestion that WAP#2 terminates a temporary connection with WAP#1 210.

Accordingly, Lefkowitz fails to teach or suggest all the features of claim 11, alone and in combination with each other, and hence claim 11 and its dependent claims would not have been anticipated by Lefkowitz for at least these reasons.

Claim 16

Independent claim 16 recites features similar to those discussed above regarding claim 11, and hence Lefkowitz would not have anticipated claim 16 for at least reasons analogous to those discussed above regarding claim 11.

Further, claim 16 recites, *inter alia*, “selecting a new access point by scanning channels according to channel information received from a present access point.”

However, Lefkowitz neither teaches nor suggests “selecting a new access point by scanning channels according to channel information received from a present access point.” This

is because Lefkowitz does not disclose that STA 205 scans channels “according to channel information received from a present access point.” Rather, Lefkowitz merely describes that “STA 205 may perform a scan for signals from other WAPs of sufficient strength.” *See* Lefkowitz, col. 6, ll. 22-25. That is to say, STA 205 simply scans channels according to signal strength, but there is no teaching or suggestion that STA 205 receives channel information from WAP#1 or scans channels “according to channel information received from a present access point.”

Accordingly, Lefkowitz fails to teach or suggest all the features of claim 16, and hence, claim 16 would not have been anticipated by Lefkowitz for at least these reasons.

Claims 18, and 20-22

Claims 18 and 20-22 depend on claim 17 and incorporate all the features of claim 17. In the Office Action, the Examiner asserts that Lefkowitz discloses all the features of claims 18 and 20-22. *See* Office Action, pages 13-15. However, the Examiner concedes that Lefkowitz fails to teach or suggest all the features of claim 17. *See* Office Action, page 40.

Accordingly, since the Examiner concedes that Lefkowitz fails to teach or suggest all the features in independent claim 17, upon which claims 18 and 20-22 depend, claims 18 and 20-22 would not have been anticipated by Lefkowitz.

Claims 23-26

Independent claim 23 recites features similar to those discussed above regarding claims 5, 11, and 16, and hence, claim 23 and its dependent claims would not have been anticipated by Lefkowitz for at least reasons analogous to those discussed above regarding claims 5, 11, and 16.

Claims 28-30, 33, and 34

Claim 28 recites, *inter alia*, “a handoff alert message process unit which receives channel information on access points different from a present access point in an extended service set, from the present access point.”

However, Lefkowitz neither teaches nor suggests “a handoff alert message process unit which receives channel information on access points different from a present access point in an extended service set, from the present access point.” This is because Lefkowitz does not disclose that STA 205 receives “channel information on access points different from a present access point in an extended service set.” Rather, Lefkowitz discloses that the message from the WAP#1 to the STA 205 is simply a message letting the STA 205 know that it is going out of the coverage area of WAP#1. *See* Lefkowitz, col. 5, lines 38-45. There is no teaching or suggestion that such a message contains “channel information on access points different from a present access point in an extended service set.”

Accordingly, Lefkowitz fails teach or suggest all the features of claim 28, and hence claim 28 and its dependent claims would not have been anticipated by Lefkowitz for at least these reasons.

Claims 38 and 39

Independent claim 38 recites features similar to those discussed above regarding claims 16 and 28, and hence, claim 38 and its dependent claims would not have been anticipated by Lefkowitz for at least reasons analogous to those discussed above regarding claims 16 and 28.

Claim 40

Independent claim 40 recites features similar to those discussed above regarding claims 5, 11, and 23, and hence, claim 40 would not have been anticipated by Lefkowitz for at least reasons analogous to those discussed above regarding claims 5, 11, and 23.

Claim 43

Independent claim 43 recites features similar to those discussed above regarding claim 11, and hence claim 43 would not have been anticipated by Lefkowitz for at least reasons analogous to those discussed above regarding claim 11.

Claim 44

Claim 44 recites, *inter alia*, “controlling a channel information collection unit to collect channel information on access points in an extended service set in response to receiving a handoff alert message from the mobile station.”

However, Lefkowitz neither teaches nor suggests “controlling a channel information collection unit to collect channel information on access points in an extended service set in response to receiving a handoff alert message from the mobile station.” This is because Lefkowitz does not disclose that WAP#1 collects “channel information on access points in an extended service set.” Rather, Lefkowitz merely describes that WAP#1 detects a lower signal level from STA 205. *See* Lefkowitz, col. 5, ll. 38-45.

Further, Lefkowitz neither teaches nor suggests “controlling a channel information collection unit to collect channel information on access points in an extended service set in response to receiving a handoff alert message from the mobile station.” This is because

Lefkowitz does not disclose that the WAP#1 collects channel information in response to a handoff alert message received from the mobile station. Rather, Lefkowitz merely discloses that STA 205 may initiate termination of communication with WAP#1, and STA 205 attempts to associate with WAP#2 215, but there is no teaching or suggestion that WAP#1 collects any type of channel information on access points in response to the termination request from STA 205. *See Lefkowitz, col. 5, line 52 to col. 6, line 50.*

Accordingly, Lefkowitz fails to teach or suggest all the features of claim 44, and hence claim 44 would not have been anticipated by Lefkowitz for at least these reasons.

Claims 45 and 46

Independent claim 45 recites features similar to those discussed above regarding claims 5, 11, 16, and 23, and hence claims 45 and its dependent claims would not have been anticipated by Lefkowitz for at least reasons analogous to those discussed above regarding claims 5, 11, 16, and 23.

Claims 48-50

Independent claim 48 recites features similar to those discussed above regarding claim 28, and hence claim 48 and its dependent claims would not have been anticipated by Lefkowitz for at least reasons analogous to those discussed above regarding claim 28.

Claim 52

Independent claim 52 recites features similar to those discussed above regarding claims 5, 11, 16, and 23, and hence claim 52 would not have been anticipated by Lefkowitz for at least reasons analogous to those discussed above regarding claims 5, 11, 16, and 23.

Claim 53

Independent claim 53 recites features similar to those discussed above regarding claim 28, and hence claim 53 would not have been anticipated by Lefkowitz for at least reasons analogous to those discussed above regarding claim 28.

Claim 51 is rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Dorenbosch et al. (U.S. Patent 6,850,503, hereinafter “Dorenbosch”). Applicant respectfully traverses the rejection.

Claim 51 recites, *inter alia*, a “data structure...comprising: address information on respective access points in the extended service set.”

However, Dorenbosch neither teaches nor suggests the “address information on respective access points in the extended service set.” This is because Dorenbosch does not disclose any data structure having “address information on respective access points in the extended service set.” At best, Dorenbosch simply discloses that wireless stations having IP addresses communicate with each other through an access point. *See* Dorenbosch, col. 5, ll. 11-20. There is no teaching or suggestion of any data structure whatsoever having “address information on respective access points in the extended service set.”

Further, claim 51 also recites, *inter alia*, “information on channels used by the respective access points in the extended service set.” However, Dorenbosch neither teaches nor suggests “information on channels used by the respective access points in the extended service set.” This is because Dorenbosch does not disclose a data structure having any sort of “information on channels used by the respective access points in the extended service set.” Rather, Dorenbosch

merely discloses using signal strength to determine a connection. *See* Dorenbosch, col. 6, ll. 39-45.

Still further, claim 51 recites, *inter alia*, "information on one or more access points adjacent to each of the respective access points in the extended service set." However, Dorenbosch is entirely silent as to information about access points that are adjacent to other access points.

Accordingly, Dorenbosch fails to teach or suggest all the features of claim 51, and hence claim 51 would not have been anticipated by Dorenbosch for at least the above reasons.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 2 and 16 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lefkowitz in view of Backes (U.S. Pub. 2004/0166870). Applicant respectfully traverses the rejection.

The filing date of Backes is February 18, 2004. Backes also claims priority from U.S. Provisional applications 60/449,602 (filed on February 24, 2003), 60/446,448 (filed on April 29, 2003), 60/472,320 (filed on May 21, 2003), and 60/472,239 (filed on May 21, 2003).

In the Amendment filed on November 13, 2007, the claim of foreign priority was perfected, and hence, the priority date for the subject application is January 23, 2003.

Therefore, without commenting on the substantive merits of the Examiner's rejection, we would request removal of Backes since the earliest filing date from which Backes might claim priority is February 24, 2003 (*e.g.*, the filing date of U.S. Provisional application 60/449,602), which is after the January 23, 2003 priority date for the subject application.

Claims 3 and 4 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lefkowitz and Backes, as applied to claim 1, and further in view of Rom.
Applicant respectfully traverses the rejection.

Claims 3 and 4 depend on claim 1 and incorporate all the features of claim 1. Even if Lefkowitz and Backes could have somehow been modified based on Rom, as the Examiner alleges, the combination would still not teach or suggest all the features in claim 1, and hence claims 3 and 4, as discussed above. Accordingly, claims 3 and 4 would not have been rendered unpatentable by the combination of Lefkowitz, Backes, and Rom for at least these reasons.

Claim 6 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lefkowitz, as applied to claim 5, in view of Rom. Applicant respectfully traverses the rejection.

Claim 6 depends on claim 5 and incorporates all the features of claim 5. Even if Lefkowitz could have somehow been modified based on Rom, as the Examiner alleges, the combination would still not teach or suggest all the features in claim 5, and hence claim 6, as discussed above. Accordingly, claim 6 would not have been rendered unpatentable by the combination of Lefkowitz and Rom for at least these reasons.

Claims 8-10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Rom, as applied to claim 7, and further in view of Lefkowitz. Applicant respectfully traverses the rejection.

Claims 8-10 depend on claim 7 and incorporate all the features of claim 7. Even if Rom could have somehow been modified based on Lefkowitz, as the Examiner alleges, the

combination would still not teach or suggest all the features in claim 7, and hence claims 8-10, as discussed above. Accordingly, claims 8-10 would not have been rendered unpatentable by the combination of Lefkowitz and Rom for at least these reasons.

Claim 17 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lefkowitz in view of Rom. Applicant respectfully traverses the rejection.

Claim 17 recites, *inter alia*, “a channel information collection unit which collects channel information on a plurality of neighboring access points in an extended service set, wherein the channel information is included in the response message.”

However, the combination of Lefkowitz and Rom neither teaches nor suggests “a channel information collection unit which collects channel information on a plurality of neighboring access points in an extended service set, wherein the channel information is included in the response message.” This is because neither Lefkowitz nor Rom, taken alone or in combination, discloses an access point that collects channel information on other access points. Rather, Lefkowitz describes that access point WAP#1 detects a signal strength received from station STA 205, but Lefkowitz does not describe that access point WAP#1 “collects channel information on a plurality of neighboring access points.” At best, Lefkowitz describes that station STA 205, and not access point WAP#1, scans for signals from other access points having sufficient strength. *See* Lefkowitz, col. 6, ll. 22-25.

Rom is merely cited for teaching channel information in a response message, and also fails to teach or suggest such a feature. Accordingly, even if Lefkowitz could have somehow been combined with Rom, as the Examiner alleges, the combination of Lefkowitz and Rom still

fails to teach or suggest all the features of claim 17, and hence claim 17 would not have been rendered unpatentable by the combination of Lefkowitz and Rom for at least these reasons.

Claims 27 and 47 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hunkeler (U.S. Patent 6,950,655) in view of Lefkowitz. Applicant respectfully traverses the rejection.

Claim 27 recites, *inter alia*, “a temporary connection/termination process unit for establishing a temporary connection between predetermined access points subject to the handoff operation, in response to a reassociation signal.”

However, the combination of Hunkeler and Lefkowitz neither teaches nor suggests “a temporary connection/termination process unit for establishing a temporary connection between predetermined access points subject to the handoff operation, in response to a reassociation signal.” This is because neither Hunkeler nor Lefkowitz, taken alone or in combination, discloses a temporary connection established between access points. As discussed above regarding claim 5, Lefkowitz does not disclose a temporary connection established between a new access point and a previous access point of a mobile terminal. Instead, Lefkowitz merely describes a connection between STA 205 and WAP#1 210 and a connection between STA 205 and WAP#2 215. *See* Lefkowitz, col. 6, ll. 29-32, 44-46. There is no teaching or suggestion of any temporary connection whatsoever established between WAP#2 215 and WAP#1 210.

The Examiner concedes that Hunkeler fails to teach or suggest the “temporary connection/termination process unit” (*see* Office Action, p. 41), and hence, even if Hunkeler and Lefkowitz could have somehow been combined, as the Examiner alleges, the combination would

still not teach or suggest all the features in claim 27. As a result, claim 27 would not have been rendered unpatentable by the combination of Hunkeler and Lefkowitz for at least these reasons.

Claim 47 recites features similar to those discussed above, and hence claim 47 also would not have been rendered unpatentable by the combination of Hunkeler and Lefkowitz for at least reasons analogous to those discussed above regarding claim 27.

Claims 31 and 32 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lefkowitz, as applied to claim 28, in view of Rom. Applicant respectfully traverses the rejection.

Claims 31 and 32 depend on claim 28 and incorporate all the features of claim 28. Even if Lefkowitz could have somehow been combined with Rom, as the Examiner alleges, the combination would still not teach or suggest all the features in claim 28, and hence claims 31 and 32, as discussed above. Accordingly, the combination of Lefkowitz and Rom would not have rendered claims 31 and 32 unpatentable for at least these reasons.

Claim 35 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lefkowitz in view of Rom. Applicant respectfully traverses the rejection.

Claim 35 recites, *inter alia*, “a handoff alert message process unit which receives channel information on a plurality of access points different from a present access point in an extended service set from the present access point.”

However, the combination of Lefkowitz and Rom neither teaches nor suggests the “handoff alert message process unit.” This is because neither Lefkowitz nor Rom, taken alone or in combination, discloses any unit that “receives channel information on a plurality of access

points different from a present access point.” Rather, Lefkowitz merely discloses that STA 205 and WAP#1 communicate to terminate a connection between STA 205 and WAP#1. There is no teaching or suggestion that STA 205 “receives channel information on a plurality of access points different from a present access point in an extended service set from the present access point.” *See* Lefkowitz, col. 5, ll. 52-54.

Rom is merely cited for teaching channel information in a response message, and also fails to teach or suggest the “handoff alert message unit.”

Further, claim 35 recites, *inter alia*, “a scanning unit which scans channels on the access points for a new access point by using the channel information.” However, the combination of Lefkowitz and Rom neither teaches nor suggests the “scanning unit.” This is because neither Lefkowitz nor Rom, taken alone or in combination, discloses a mobile station that scans for channels using channel information received from an access point. Instead, Lefkowitz describes that STA 205 independently scans signals from other WAPs, with no teaching or suggestion that STA 205 “scans channels on the access points for a new access point by using the channel information.” *See* Lefkowitz, col. 6, ll. 22-25.

Again, Rom is merely cited for teaching channel information in a response message, and also fails to teach or suggest the “scanning unit.”

Accordingly, even if Lefkowitz and Rom could have somehow been combined, as the Examiner alleges, the combination of Lefkowitz and Rom still fails to teach or suggest all the features of claim 35. As a result, claim 35 would not have been rendered unpatentable by the combination of Lefkowitz and Rom for at least these reasons.

Claims 36 and 37 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lefkowitz in view of Rom. Applicant respectfully traverses the rejection.

Independent claim 36 recites features similar to those discussed above regarding claim 35, and hence the combination of Lefkowitz and Rom also would not have rendered claim 36 and its dependent claims unpatentable for at least reasons analogous to those discussed above regarding claim 35.

Claim 41 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lefkowitz, as applied to claim 40, in view of Rom. Applicant respectfully traverses the rejection.

Claim 41 depends on claim 40 and incorporates all the features of claim 40. Even if Lefkowitz could have somehow been combined with Rom, as the Examiner alleges, the combination would still not teach or suggest all the features of claim 40, and hence claim 41, as discussed above. Accordingly, claim 41 would not have been rendered unpatentable by the combination of Lefkowitz and Rom for at least these reasons.

Allowable Subject Matter

Claim 19 is objected to as allegedly being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant holds the rewriting of claim 19 in abeyance until the arguments with respect to claim 17 are considered.

Claims 54-60 are allowed.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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